

# STIC Search Report

EIC 3700

STIC Database Tracking Number: 209929

**TO:** Robert Nasser  
**Location:** RND 7a29  
**Art Unit:** 3735  
**Monday, January 08, 2007**

**Case Serial Number:** 10/687270

**From:** John Sims  
**Location:** EIC 3700  
**RND 8B31**  
**Phone:** 571 272-3507

**john.sims@uspto.gov**

## Search Notes

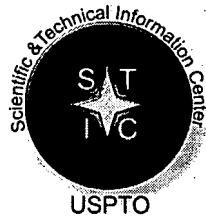
Examiner Nasser:

Please examine these results carefully.

I first searched the chemical in Chemical Abstracts, then cross referenced the registry number into a number of other files. This produced what I think are some good results.

I then used a text-based search in various other files, which also produced some results which may be useful.

If I need to re-focus this search, or expand the terminology, please let me know.



# STIC Search Results Feedback Form

**EIC 3700**

Questions about the scope or the results of the search? Contact **the EIC searcher or contact:**

**John Sims, EIC 3700 Team Leader  
Ext 23507 RND 8B35**

## Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:*  *Example: 3730*

➤ *Relevant prior art found, search results used as follows:*

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- Foreign Patent(s)
- Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

**Comments:**

Drop off or send completed forms to STIC/EIC3700 RND 8B31



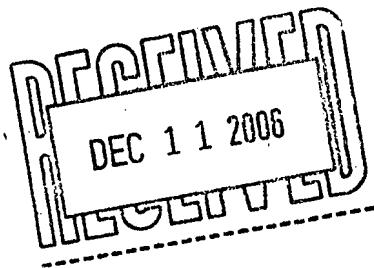
**Solomon, Terrance**

209929

**From:** ROBERT NASSER [bob.nasser@uspto.gov]  
**Sent:** Sunday, December 10, 2006 8:11 PM  
**To:** STIC-EIC3700  
**Subject:** Database Search Request, Serial Number: 10687270

**Requester:**  
ROBERT NASSER (P/3735)  
**Art Unit:**  
GROUP ART UNIT 3735  
**Employee Number:**  
69600  
**Office Location:**  
RND 07A29  
**Phone Number:**  
(571)272-4731  
**Mailbox Number:**

**Case serial number:**  
10687270  
**Class / Subclass(es):**  
600/304  
**Earliest Priority Filing Date:**  
10/16/2003  
**Format preferred for results:**  
Paper  
**Search Topic Information:**  
i have a verybroad claim



i am looking for usign a specific compund - called michlers hydrol or 4,4'-bis (dimethylamino)-benzhydrol as a color change indicator that changes color in the presence of compounds found in the breath of a human, i.e. sulfur, halides, carbon dioxide, nitrogen

the reference need not be used to analyze breath, just to analyze a compound that might be in exhaled breath

**Special Instructions and Other Comments:**

4/3,K/3 (Item 1 from file: 34) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCE DIRECTORY](#)  
SciSearch(R) Cited Ref Sci

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08134865 **Genuine Article#:** 250CF **No. References:** 9

**An automatic measurement of hydrogen cyanide in air by a monitoring tape method**

**Author:** Nakano N (REPRINT) ; Yamamoto A; Kobayashi Y; Nagashima K

**Corporate Source:** RIKEN KEIKI CO LTD,ITABASHI KU, 2-7-6 AZUSA WA/TOKYO 1748744/JAPAN/ (REPRINT); ANAL CTR CO LTD,SUMIDA KU/TOKYO 1310032/JAPAN/; KOGAKUIN UNIV,FAC ENGN/HACHIOJI/TOKYO 1920015/JAPAN/

**Journal:** ANALYTICA CHIMICA ACTA , 1999 , V 398 , N2-3 ( OCT 22 ) , P 305-310

**ISSN:** 0003-2670 **Publication date:** 19991022

**Publisher:** ELSEVIER SCIENCE BV , PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS

**Language:** English **Document Type:** ARTICLE ( ABSTRACT AVAILABLE )

**Abstract:** ...cyanide gas in air using a sensitive tape for hydrogen cyanide. It is based on color change of the tape by reaction with hydrogen cyanide. The tape containing silica gel as an absorbent and impregnated with a processing solution that includes 4,4' -bis( dimethylamino)diphenylmethane(tetrabase) copper(II) acetate, butylhydroxytoluene, glycerin and methanol was found to be a highly...

?

7/3,K/1 (Item 1 from file: 5) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

Biosis Previews(R)

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0008792362 Biosis No.: 199395094628

**Reduction in the levels of oral malodor precursors by hydrogen peroxide: In vitro and in vivo assessments**

**Author:** Grigor J; Roberts A J

**Author Address:** Unilever Dental Res., Port Sunlight Lab., Quarry Road East, Bebington, Wirral, England\*\*England

**Journal:** Journal of Clinical Dentistry 3 ( 4 ): p 111-115 1992

**ISSN:** 0895-8831

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

**Abstract:** ...In both cases the concentration of thiol groups was determined colorimetrically by quantitative reaction with 4,4'- bis (dimethylamino) diphenyl carbinol. Addition of volumes of hydrogen peroxide solution (containing between 0.18 and 0...

**Descriptors:**

**Miscellaneous Terms:** ...HALITOSIS;

7/3,K/2 (Item 1 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

MEDLINE(R)

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09519286 PMID: 1339126

**Reduction in the levels of oral malodor precursors by hydrogen peroxide: in-vitro and in-vivo assessments.**

Grigor J; Roberts A J

Unilever Dental Research, Port Sunlight Laboratory, Bebington, Wirral, England.

Journal of clinical dentistry ( UNITED STATES ) 1992 , 3 (4) p111-5 , ISSN: 0895-8831--Print Journal Code: 8904411

Publishing Model Print

**Document type:** Clinical Trial; Journal Article; Randomized Controlled Trial

**Languages:** ENGLISH

**Main Citation Owner:** NLM

**Record type:** MEDLINE; Completed

...In both cases the concentration of thiol groups was determined colorimetrically by quantitative reaction with 4,4'- bis (dimethylamino) diphenyl carbinol. Addition of volumes of hydrogen peroxide solution (containing between 0.18 and 0...

**Descriptors:** \*Halitosis--prevention and control--PC; \*Hydrogen Peroxide --therapeutic use--TU;

\*Saliva--chemistry--CH; \*Sulphydryl Compounds --metabolism...

RNasser

ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1987:594547 CAPLUS  
DOCUMENT NUMBER: 107:194547  
TITLE: Test strips for halitosis detection  
INVENTOR(S): Iwakawa, Masaharu  
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62115364	A	19870527	JP 1985-255536	19851114
JP 06041949	B	19940601		

PRIORITY APPLN. INFO.: JP 1985-255536 19851114  
AB A test strip for mercaptan detection for halitosis diagnosis (based on color changes) consists of bis(4-dimethylaminophenyl)methanol or bis(4-diethylaminophenyl)methanol. Filter papers (Toyo Filter Paper number 131) were soaked in a Permanent Yellow Lemon number 631 suspension, dried, again soaked in a solution containing bis(4-dimethylaminophenyl)methanol (0.4 mg), acetone (10 mL) and pH 5.01 citrate buffer (2 mL) and freeze dried. The paper was cut to strips (6 x 10 mm) and attached to a plastic holder. Development of a yellow color is indicative of pos. results.

L5 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1984:12715 CAPLUS  
DOCUMENT NUMBER: 100:12715  
TITLE: Visual chemical indicating composition for monitoring sterilization  
INVENTOR(S): Tratnyek, Joseph P.  
PATENT ASSIGNEE(S): American Sterilizer Co., USA  
SOURCE: U.S., 8 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

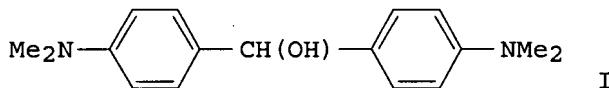
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4407960	A	19831004	US 1980-162811	19800625
CA 1170551	A1	19840710	CA 1981-380496	19810624

PRIORITY APPLN. INFO.: US 1980-162811 A 19800625  
AB An indicator system and device for monitoring ethylene oxide [75-21-8] sterilization in which color changes are progressive with conditions and period of sterilization comprises a leuco precursor of an arylmethane dye and an acid. The composition is integrated into a carrier and a polymer binder is used to form a coated ticket or tape device. Systems were prepared using alc. soluble nylon or Et cellulose as polymer binders, Michler's hydrol [119-58-4] as leuco dye, 4,4-bis(4-hydroxyphenyl)pentanoic acid [126-00-1] or styrene-maleic anhydride polymer [9011-13-6] as acid component, and MeOH, CH<sub>2</sub>Cl<sub>2</sub>, or Me<sub>2</sub>CO as solvents. The systems change from a dark blue to colorless on sterilization by ethylene oxide.

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L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1983:50019 CAPLUS  
DOCUMENT NUMBER: 98:50019  
TITLE: Color indicator for bad breath  
PATENT ASSIGNEE(S): Kao Soap Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57135360	A	19820820	JP 1981-21278	19810216
JP 62051425	B	19871029		
PRIORITY APPLN. INFO.:			JP 1981-21278	19810216
GI				



AB Compns. containing 4,4'-bisdimethylaminodiphenylcarbitol (I) and a surfactant quant. indicate the intensity of bad breath caused by SH compds. from protein decomposition. The blue color of I fades in the presence of SH compds. and its sensitivity increases with a surfactant. Measurements may be made on breath or saliva samples.

=>

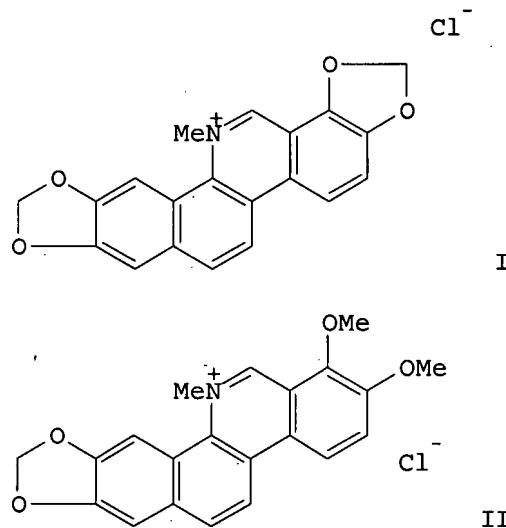
RNasser

ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2001:563956 CAPLUS <<LOGINID::20070108>>  
DOCUMENT NUMBER: 135:119229  
TITLE: Container for testing bad breath  
INVENTOR(S): Yamamoto, Tatsuo; Oka, Takayuki  
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001208753	A	20010803	JP 2000-22189	20000131
PRIORITY APPLN. INFO.:			JP 2000-22189	20000131

AB A convenient container is provided for accurately testing bad breath after collecting a saliva sample. The container is equipped with a tube having a closed bottom and an opening at one end, and a plug for tightly closing the opening of the tube. A test piece for measuring bad breath is accommodated in the tube with a closed bottom, and a marker displaying the saliva quantity is installed on the tube with a closed bottom. Diagrams describing the container assembly is given.

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1986:10366 CAPLUS <<LOGINID::20070108>>  
DOCUMENT NUMBER: 104:10366  
TITLE: Sanguinaria extract, a new agent for the control of volatile sulfur compounds in the oral cavity  
AUTHOR(S): Boulware, R. T.; Southard, G. L.; Yankell, S. L.  
CORPORATE SOURCE: Vipont Lab. Inc., Fort Collins, CO, 80524, USA  
SOURCE: Journal of the Society of Cosmetic Chemists (1985), 36(4), 297-302  
CODEN: JSCCA5; ISSN: 0037-9832  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI

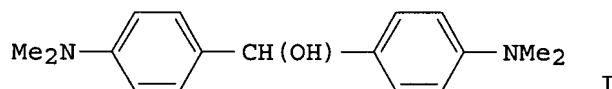


AB Besides antiplaque properties, Sanguinaria extract containing Sanguinarine chloride (I) [5578-73-4] and chelerythrine (II) [34316-15-9] was effective in controlling the volatile sulfur compds. (VSC) responsible for bad breath. The relative effectiveness of several com. oral rinses in controlling VSC was evaluated using incubated salivary samples and a colorimetric method of sulfhydryl anal. This screening method employed 4,4'-bis(dimethylamino)diphenylcarbinol [119-58-4], a thiol-sensitive reagent, and inexpensive instrumentation. Among the 4 rinses tested, an oral rinse containing Sanguinaria extract and ZnCl<sub>2</sub> was more effective (99% confidence level) in reducing measurable VSC levels than rinses containing Zn<sup>2+</sup> alone, a mixture of cetylpyridinium chloride [123-03-5] and domiphen bromide [538-71-6], or a rinse compounded with a high concentration of essential oils.

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1983:50019 CAPLUS <<LOGINID::20070108>>  
 DOCUMENT NUMBER: 98:50019  
 TITLE: Color indicator for bad breath  
 PATENT ASSIGNEE(S): Kao Soap Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57135360	A	19820820	JP 1981-21278	19810216
JP 62051425	B	19871029		
PRIORITY APPLN. INFO.: GI			JP 1981-21278	19810216

RNasser



AB Compns. containing 4,4'-bisdimethylaminodiphenylcarbitol (I) and a surfactant quant. indicate the intensity of bad breath caused by SH compds. from protein decomposition. The blue color of I fades in the presence of SH compds. and its sensitivity increases with a surfactant. Measurements may be made on breath or saliva samples.

=> lo

LO IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

? d s

Set	Items	Description
S1	6	S MICHLER?()HYDROL
S2	1961941	S BREATH??? OR SALIVA OR EXHAL????? OR COMPOUND? ?
S3	4	S S1 AND S2
S4	213	S 4()4()BIS()DIMETHYLAMINO
S5	336	S BENZHYDROL? ?
S6	526	S S4 OR S5
S7	45388	S (COLOR??? OR COLOUR???) (5N)CHANG???
S8	272	S S2 AND S6
S9	9	S S7 AND S8
S10	9	S S9 NOT S3

? show files

[File 347] JAPIO Dec 1976-2006/Sep(Updated 061230)

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[File 350] Derwent WPIX 1963-2006/UD=200702

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[File 371] French Patents 1961-2002/BOPI 200209

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*\*File 371: This file is not currently updating. The last update is 200209.*

```
? d s
Set    Items    Description
S1      11      S MICHLER?()HYDROL
S2      11      RD (unique items)
; show files
```

[File 2] INSPEC 1898-2006/Dec W2

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[File 5] Biosis Previews(R) 1969-2007/Dec W5

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[File 6] NTIS 1964-2007/Dec W4

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[File 8] Ei Compendex(R) 1970-2007/Dec W5

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[File 34] SciSearch(R) Cited Ref Sci 1990-2007/Dec W5

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[File 35] Dissertation Abs Online 1861-2006/Nov

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[File 98] General Sci Abs 1984-2006/Dec

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[File 99] Wilson Appl. Sci & Tech Abs 1983-2006/Nov

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[File 144] Pascal 1973-2006/Dec W1

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[File 434] SciSearch(R) Cited Ref Sci 1974-1989/Dec

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[File 441] **ESPICOM Pharm&Med DEVICE NEWS 2007/Jul W1**

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? d s  
Set      Items      Description  
S1      301      S MICHLER?()HYDROL? OR 4()4(1N)BIS()DIMETHYLAMINO  
S2      71856      S (COLOR????? OR COLOUR?????)(6N)(CHANG??? OR INDICAT????)  
S3      7      S S1 AND S2  
S4      3      RD (unique items)  
S5      727742      S BREATH??? OR EXHAL????? OR HALITOSIS? OR EXPIRAT????? OR ASPIRAT?????  
S6      2      S S1 AND S5  
S7      2      S S6 NOT S4  
; show files

[File 2] INSPEC 1898-2006/Dec W2

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[File 6] NTIS 1964-2007/Dec W4

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[File 441] ESPICOM Pharm&Med DEVICE NEWS 2007/Jul W1  
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```
? d s
Set      Items  Description
S1       0      S MICHLER? ?()HYDROL OR 4()4(1N)BIS()DIMETHYLAMINO()BENZHYDROL
S2       7      S 4()4()BIS()DIMETHYLAMINO
S3       6      RD  (unique items)
; show files
```

[File 16] **Gale Group PROMT(R)** 1990-2007/Jan 03

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[File 160] **Gale Group PROMT(R)** 1972-1989

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[File 9] **Business & Industry(R)** Jul/1994-2007/Jan 03

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[File 148] **Gale Group Trade & Industry DB** 1976-2007/Jan 01

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[File 621] **Gale Group New Prod.Annou.(R)** 1985-2007/Dec 29

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d his

(FILE 'HOME' ENTERED AT 14:14:33 ON 08 JAN 2007)

FILE 'REGISTRY' ENTERED AT 14:14:59 ON 08 JAN 2007  
E "MICHLER'S HYDROL"/CN

L1 1 S E3

FILE 'MEDLINE, BIOSIS, EMBASE, PASCAL, JICST-EPLUS, CAPLUS' ENTERED AT  
14:16:10 ON 08 JAN 2007

L2 280 S L1

L3 52408 S (COLOR OR COLOUR) (6W) (CHANG### OR INDICAT####)

L4 9 S L2 AND L3

L5 9 DUP REMOVE L4 (0 DUPLICATES REMOVED)

RNasser

d his

(FILE 'HOME' ENTERED AT 11:56:54 ON 08 JAN 2007)

FILE 'REGISTRY' ENTERED AT 11:57:15 ON 08 JAN 2007

E MICHLERS HYDROL/CN

E MICHLER

E MICHLER/CN

L1 1 S E9

FILE 'BIOSIS, MEDLINE, CASREACT, CAPLUS, IFIPAT, PIRA' ENTERED AT  
12:00:04 ON 08 JAN 2007

L2 316 S L1

L3 3296707 S BREATH### OR X

L4 173061 S BREATH### OR EXHAL?

L5 5 S L2 AND L4